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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,407	11/19/2001	Hideo Furukawa	VX012384	8523
21369	7590	11/05/2004	EXAMINER	
VARNDELL & VARNDELL, PLLC 106-A S. COLUMBUS ST. ALEXANDRIA, VA 22314			SORKIN, DAVID L.	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 11/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/988,407

Applicant(s)

FURUKAWA, HIDEO

Examiner

David L. Sorkin

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 11 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 22 November 2001. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

### *Claim Objections*

2. In line 7 of claim 6, the period should be a semicolon.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 5, 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al. (US 4,533,254). Regarding claim 1, Cook ('254) discloses an apparatus comprising mixing means (22); pressure rising means (26) and emulsifying means (1) wherein the emulsifying means includes a plurality of chambers into which the mixture flows, the chambers portioned by walls, and the walls having one or more small holes (for example 75). Regarding claim 3, Cook ('254) discloses an apparatus comprising mixing means (22); pressure rising means (26) and emulsifying means (1) wherein the emulsifying means includes a plurality of chambers into which the mixture flows, the chambers portioned by walls, and the walls having one or more small holes

(for example 75). The pump would be capable of providing a pressure in the claimed range (see col. 8, lines 30-31). Claims 5 and 12 only regard the manner in which the apparatus is intended to be used and do not further limit the claimed structure.

Regarding claim 10, a pre-pressurizing pump (9) upstream of the main pump is disclosed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, 6, 7-9, 13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al. (US 4,533,254). Regarding claim 2, in the apparatus of Cook ('254) discussed above it is not expressly stated that the size of the hole is in the range 0.5 to 2 mm; however, col. 8 lines 3-24 makes clear that this is a parameter to be selected and optimized. Regarding claims 4 and 6, Cook ('254) discloses an apparatus comprising mixing means (22); pressure rising means (26) and emulsifying means (1) wherein the emulsifying means includes a plurality of chambers into which the mixture flows, the chambers portioned by walls, and the walls having one or more small holes (for example 75). Claims 7, 9, 13, 14 and 17 would have been obvious to one of ordinary skill in the art to control flow. Claims 8, 15 and 16 would have been suggested to one of ordinary skill in the art by the discussion of diesel fuel in col. 13, lines 60-68. The pump would be capable of providing a pressure in the claimed range (see col. 8,

lines 30-31). It is not expressly stated that the size of the hole is in the range 0.5 to 2 mm; however, col. 8 lines 3-24 makes clear that this is a parameter to be selected and optimized. Regarding claim 18, a pre-pressurizing pump (9) upstream of the main pump is disclosed. Claim 20 only regards the manner in which the apparatus is intended to be used and do not further limit the claimed structure.

***Allowable Subject Matter***

7. Claims 11 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Sorkin  
Primary Examiner  
Art Unit 1723

David Sorkin